

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A storage battery comprising a collector comprising a thin electrically-conductive ceramic layer formed on a collector substrate,

wherein said collector has an active material provided thereon, ~~a pressure is added perpendicularly to the current collector plane, and~~ and there is provided a structure such that a pressure of 4×10^4 to 20×10^4 Pa is maintained perpendicularly to the surface-plane of said collector in said storage battery.

2. (previously presented): The storage battery according to Claim 1, wherein a process involving the deposition from a gas phase is used to form said thin electrically-conductive ceramic layer on the surface of said collector substrate.

3. (previously presented): The storage battery according to Claim 2, wherein said process involving the deposition from a gas phase is sputtering process.

4. (previously presented): The storage battery according to Claim 2, wherein said process involving the deposition from a gas phase is CVD process.

5. (previously presented): The storage battery according to any one of Claims 1 to 4, wherein the material constituting said collector substrate is a metal or metal alloy selected from the group consisting of lead, lead alloy, tin, tin alloy, bismuth and bismuth alloy.

6. (previously presented): The storage battery according to any one of Claims 1 to 4, wherein the material constituting said collector substrate is an electrically-conductive polymer.

7. (previously presented): The storage battery according to any one of Claims 1 to 4, wherein as said electrically-conductive ceramic there is used SnO_2 .

8. (previously presented): The storage battery according to Claim 7, wherein said electrically-conductive ceramic SnO_2 comprises an Sb compound incorporated therein in an amount of from 0.5 mole % to 8 mole % based on the total amount of moles of Sn and Sb.

9. (previously presented): The storage battery according to Claim 7, wherein said electrically-conductive ceramic SnO_2 comprises F incorporated therein in an amount of from 7 mole % to 60 mole % based on the total amount of moles of Sn and F.

10. (previously presented): The storage battery according to Claim 1, wherein as said electrically-conductive ceramic, any silicon compound selected from the group consisting of TiSi_2 , Ti_5Si_3 , TaSi_2 , Ta_5Si_3 , NbSi_2 and Nb_5Si_3 is used.

Claims 11-13. (canceled).

14. (previously presented): The storage battery according to any one of Claims 1 to 4, comprising a bipolar battery type structure having a plurality of bipolar type electrodes each comprising a positive active material provided on one side of said collector and a negative active material provided on the other side, wherein the positive active material side of one bipolar electrode being opposed to the negative active material side of another, and a separator for retaining an electrolyte provided between said laminated bipolar type electrodes.

15. (previously presented): The storage battery according to any one of Claims 1 to 4, comprising one or two of said collectors having an active material provided on one surface thereof but free of active material on the other surface, wherein the surface of said collector which is free of active material forms at least a part of the outer case of said storage battery.

Claims 16-19. (canceled).

20. (previously presented): The storage battery according to any one of Claims 1 to 4, wherein said storage battery is a lead acid battery.

Claims 21-23. (canceled).

24. (previously presented): The storage battery according to Claim 10, wherein the material constituting said collector substrate is a metal or metal alloy selected from the group consisting of lead, lead alloy, tin, tin alloy, bismuth and bismuth alloy.

25. (previously presented): The storage battery according to Claim 10, wherein the material constituting said collector substrate is an electrically-conductive polymer.

Claim 26. (canceled).

27. (previously presented): The storage battery according to Claim 8, wherein said electrically-conductive ceramic SnO_2 comprises F incorporated therein in an amount of from 7 mole % to 60 mole % based on the total amount of moles of Sn and F.

28. (previously presented): The storage battery according to Claim 2 wherein as said electrically-conductive ceramic, any silicon compound selected from the group consisting of TiSi_2 , Ti_5Si_3 , TaSi_2 , Ta_5Si_3 , NbSi_2 and Nb_5Si_3 is used.

29. (previously presented): The storage battery according to Claim 3, wherein as said electrically-conductive ceramic, any silicon compound selected from the group consisting of TiSi_2 , Ti_5Si_3 , TaSi_2 , Ta_5Si_3 , NbSi_2 and Nb_5Si_3 is used.

30. (previously presented): The storage battery according to Claim 4, wherein as said electrically-conductive ceramic, any silicon compound selected from the group consisting of TiSi_2 , Ti_5Si_3 , TaSi_2 , Ta_5Si_3 , NbSi_2 and Nb_5Si_3 is used.

31. (previously presented): The storage battery according to any one of Claims 28 to 30, wherein the material constituting said collector substrate is a metal or metal alloy selected from the group consisting of lead, lead alloy, tin, tin alloy, bismuth and bismuth alloy.

32. (previously presented): The storage battery according to any one of Claims 28 to 30, wherein the material constituting said collector substrate is an electrically-conductive polymer.

33. (previously presented): The storage battery according to any one of Claims 10 and 28 to 30, wherein said storage battery is a lead acid battery.